ABSTRACT

A network accelerator for TCP/IP includes programmable logic for performing transparent protocol translation of streamed protocols for audio/video at network signaling rates. The programmable logic is configured in a parallel pipelined architecture controlled by state machines and implements processing for predictable patterns of the majority of transmissions which are stored in a content addressable memory, and are simultaneously stored in a dual port, dual bank application memory. The invention allows raw Internet protocol communications by cell phones, and cell phone to Internet gateway high capacity transfer that scales independent of a translation application, by processing packet headers in parallel and during memory transfers without the necessity of conventional store and forward techniques.